Welcome from the Chairs

The VISSOFT conference is the main venue for discussing software visualization research. Traditionally, VISSOFT brings together a community of researchers from software engineering, information visualization, human-computer interaction, computer graphics, and data science to discuss theoretical foundations, algorithms, techniques, tools, and applications related to software visualization.

This year's VISSOFT, co-held with ICSME, encouraged a variety of submissions that addressed outstanding challenges in software systems using visualization. This included technical papers, evaluations, applications/design studies, systems and formalisms, and papers that present novel ideas and tools.

We received 42 submissions: 23 technical papers, 16 New Ideas and Emerging Results (NIER) and Tool Demo (TD) papers, and 3 journal-first presentations of selected software visualization papers having appeared earlier in journals. Technical and NIER/TD papers were peer-reviewed by 3 members of the program committee. The submitted journal-first presentations were assessed based on the suitability of the topic by the program co-chairs. Together with the PC, we had an online discussion when making the decisions. In the end, we accepted the 9 technical papers and 14 NIER/TD papers. A keynote talk by Michele Lanza (University of Lugano, Switzerland) and a capstone talk by Daniel Weiskopf (University of Stuttgart, Germany) complete the program.

For a second year, due to the impact of COVID-19 VISSOFT has been conducted online. The accepted papers have been published, as originally planned, in IEEE Xplore.

We thank all authors for trusting this event to disseminate their work. Also, we would like to thank the members of the program committee who provided authors with detailed reviews of their work. We thank Craig Anslow and Alexandre Bergel for their work on the Most Influential Paper committee; Richard Müller for chairing the Tool Demo selection; Fabio Petrillo for coordinating the proceedings production; Alison Blanco for coordinating the web materials; and Carolin Brandt for organizing the publicity. Last but not least, we thank Mike Papadakis and Magali Martin from ICSME and Cristina Ceballos from IEEE for helping us with the organizational aspects of our conference.

Alexandru Telea
Utrecht University, Netherlands
General Chair

Leonel Merino
Pontifical Catholic University of Chile, Chile
Program Co-Chair

Juan Pablo Sandoval Alcocer
Pontifical Catholic University of Chile, Chile
Program Co-Chair

Accepted Papers

Technical Papers

1. A Scalable Log Differencing Visualisation Applied to COBOL Refactoring. Céline Deknop, Kim Mens, Alexandre Bergel, Johan Fabry and Vadim Zaytsev
2. CodeCity: On-Screen or in Virtual Reality? David Moreno-Lumbreras, Roberto Minelli, Andrea Villaverde, Michele Lanza and Jesus M. Gonzalez-Barahona
3. CodingTM: Development Task Visualization for SW Code Comprehension. Taeyoung Kim, Suntae Kim and Duksan Ryu.
4. Continuous Rationale Visualization. Anja Kleebaum, Barbara Paech, Jan Ole Johanssen and Bernd Bruegge.
5. Global Overviews of Granular Test Coverage with Matrix Visualizations. Kaj Dreef, Vijay Krishna Palepu and James Jones
6. Trace Visualization within the Software City Metaphor: A Controlled Experiment on Program Comprehension. Veronika Dashuber and Michael Philippsen
7. TransVis: Using Visualizations and Chatbots for Supporting Transient Behavior in Microservice Systems. Samuel Beck, Sebastian Frank, Mir Alireza Hakamian, Leonel Merino and André van Hoorn
8. Visualization of Object-Oriented Variability Implementations as Cities. Johann Mortara, Philippe Collet and Anne-Marie Déry
9. Visualizing Metric Trends for Software Portfolio Quality Management. Patric Genfer, Johann Grabner, Christina Zoffi, Mario Bernhart and Thomas Grechenig

NIER/TD Papers

1. An Interactive Dashboard for Visualizing the Provenance of Software Development Processes. Andreas Schreiber, Lynn von Kurnatowski, Annika Meinecke and Claas de Boer.
2. Analyzing and Visualizing Projects and their Relations in Software Ecosystems. Van Tuan Tran, Cheng Cheng, Fabio Petrillo and Yann-Gaël Guéhéneuc
3. Augmenting Code Review Experience Through Visualization. Faruk Balcı, Dilruba Sultan Haliloğlu, Onur Şahin, Cankat Tilki, Mehmet Ata Yurtsever and Eray Tüzün
4. CHANGEVIZ: Enhancing the GitHub Interface with Method Calls Information. Lorenzo Gasparini, Enrico Fregnan, Larissa Braz, Tobias Baum and Alberto Bacchelli
5. Codoc: Code-driven Architectural View Specification Framework for Python. Casper Weiss Bang and Mircea Lungu
6. Live Visualization of Dynamic Software Cities with Heat Map Overlays. Alexander Krause, Malte Hansen and Wilhelm Hasselbring
7. React-bratus: Visualising React.js Component Hierarchies. Mircea Lungu and Stephan Boersma
8. Towards a JSON-based Algorithm Animation Language. Artturi Tilanterä, Giacomo Mariani, Ari Korhonen and Otto Seppälä
9. Understanding High-Level Behavior with Light-Traces Visualization Metaphor. Dorian Vandamme, Houari Sahraoui and Pierre Poulin.
10. Visualizing Data in Software Cities. Susanna Ardigò, Csaba Nagy, Roberto Minelli and Michele Lanza
11. Visualizing Discord Servers. Marco Raglianti, Roberto Minelli, Csaba Nagy and Michele Lanza

12. Visualizing GitHub Issues. Aron Fiechter, Roberto Minelli, Csaba Nagy and Michele Lanza
13. Visually Analyzing the Code Quality of Component-based Web Applications. Hagen Tarner, Daniel van den Bongard and Fabian Beck
14. Voronoi Evolving Treemaps. Davide Paolo Tua, Roberto Minelli and Michele Lanza

The conference can be found on the web at:

`https://vissoft.info/2021/`

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- Samuel Beck, University of Stuttgart, Germany
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- Stephan Diehl, University Trier, Germany
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- Malte Hansen, Kiel University, Germany

September 2021

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Leonel Merino
Juan Pablo Sandoval Alcocer
VISSOFT'21 Program Committee Co-Chairs

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